

# Learning from Light on “Take Our Sons to Work” Day at the NSLS

*October 14, 2002*

On October 14, over fifteen sons learned about work done at the NSLS, and even performed their own scientific experiments. The one-day visit was part of the national “Take our Sons to Work Day”. At the NSLS, the boys learned that the facility produces light that can take many forms, from infrared to x-rays, and this light is used for applications in many fields of science.



*NSLS sons were part of over 50 boys that participated in BNL's annual "Take Our Sons to Work Day".*



NSLS scientist Marc Allaire offered a tour of the experimental floor to the boys. They saw close-up how a beam line is designed for macromolecular crystallography, a technique in which light is diffracted from

tiny protein crystals in order to determine their structure. Later, the boys toured the Control Room, where Machine Operator Gary Weiner told them how synchrotron light is made. The boys were full of questions and were very interested in operating the controls themselves.

At the end of the program, the boys had the opportunity to perform their own scientific experiments with light. They first observed simple reflection of light from a mirror. They then learned about the process of diffraction by reflecting red laser light from the world's most popular diffraction grating — a CD-ROM. But perhaps the most exciting moment was when the boys created fantastic rainbow patterns by diffracting visible white light from the CD-ROM.

-Marc Allaire